



US 20040263479A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2004/0263479 A1**
(43) **Pub. Date: Dec. 30, 2004**(54) **ACTIVE KEYBOARD SYSTEM FOR
HANDHELD ELECTRONIC DEVICES****Publication Classification**(76) Inventor: **Mark Shkolnikov, Oak Hill, VA (US)**(51) **Int. Cl.⁷ G09G 5/00**(52) **U.S. Cl. 345/169**

Correspondence Address:

Richard C. Litman**LITMAN LAW OFFICES, LTD.****P.O. Box 15035****Arlington, VA 22215 (US)**(21) Appl. No.: **10/895,967**(22) Filed: **Jul. 22, 2004****Related U.S. Application Data**(63) Continuation-in-part of application No. 10/320,529,
filed on Dec. 17, 2002.(60) Provisional application No. 60/342,382, filed on Dec.
27, 2001.(57) **ABSTRACT**

An active keyboard system includes a processor, a memory, and a display communicatively connected to one another. The system includes input means for inputting data and commands into the system. The input means include at least one selector, and a plurality of keys. Active keyboard system software is stored on the memory and is configured to dynamically present available choices on the display grouped to effect unambiguous selection of the available choices through use of the input means. The active keyboard system software includes presentation code and filter code. The presentation code includes step or scroll resolution code to enable scrolling, and grid presentation code to organize available choices on a visual grid and provide the visual grid to the display. The grid presentation code configures the visual grid with one or more panes each configured as a matrix with a plurality of columns and plurality of rows.

